



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

IN REPLY REFER TO:

BMB:BMT

June 5, 1968

Dr. Joshua Lederberg
Department of Genetics
Stanford University
Palo Alto, California 94304

Dear Dr. Lederberg:

The Division of Biology and Medicine and the Division of Research of the U. S. Atomic Energy Commission are currently reviewing the potential of enriched carbon-13 as a tool in science, medicine, and industry. The objective of this review is to determine, as best we can, whether the advantages and utility of large amounts of enriched carbon-13 at a reasonable price would justify the cost of (1) an accelerated development of our current work in production of carbon-13, and (2) the initiation of studies on carbon-13 technology and beneficial applications. The enclosed note outlines some pertinent information which is currently available about carbon-13.

To ascertain potential use and requirements for this isotope in various areas of interest, it would be most helpful to us if you would consider and answer the questions at the end of this letter. If you have a colleague who might alternately or additionally provide answers to our questions, please feel free to give him this letter.

In effect this is a market survey for enriched carbon-13. More than anything else we need numerical estimates of the amount of 90% enriched carbon-13 that might be used in 5 to 10 years if the price could be reduced to \$1 to \$10/gram. To get numbers, we need individual estimates of potential use based on extrapolations of existing technology and some rather difficult crystal ball gazing.

- 1) Do you think your research and development program could be appreciably helped by availability of carbon-13 labeled compounds at reasonable prices?

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- 2) In what specific areas and for what kinds of experiments would you consider carbon-13 of immediate and/or potential interest to your research program? Assume you could get needed instrumentation.
- 3) If cost could be reduced to \$1 - \$10/g, what quantities of carbon-13 in synthesized molecules (as grams of carbon-13) do you think you might use per year (1) in the near future and (2) in 5 - 10 years?

An early reply to the above questions is requested as the opinions and data are urgently needed for a preliminary report on this problem.

Sincerely yours,



Bert M. Tolbert
Biophysicist, Biology Branch
Division of Biology and Medicine

Enclosures:
As Stated
Self-Addressed Return Envelope